The FIGHT TO SAVE AMERICA'S WATERS

A MARK TRAIL ADVENTURE IN PUBLIC HEALTH AND CONSERVATION

"HELLO! I'M MARK TRAIL, THE WOODSMAN. YOU KNOW, FOLKS, I NEVER STOP MARVELLING AT NATURE AND THE GOOD THINGS SHE GIVES US. PERHAPS THE MOST PRECIOUS OF NATURE'S GIFTS IS WATER...CLEAN WATER... AND YET WE DON'T APPRECIATE WHAT A WONDERFUL GIFT IT IS... UNTIL SOMETHING COMES ALONG TO MAKE WATER OUR DEADLY ENEMY INSTEAD OF OUR LIFE-GIVING FRIEND. THIS STORY IS ABOUT THE DANGER THAT LURKS IN AMERICA'S RIVERS, LAKES AND STREAMS... AND WHAT YOU CAN DO TO DRIVE THAT DANGER AWAY."

SANITARY WATER BOARD
Pennsylvania Department of Health

MARK TRAIL GOES HUNTING AND SHOOTING IN LOST FOREST... HUNTING FOR GOOD PICTURES TO SHOOT...
ANDY, YOU OLD CAMERA HOG. MOVE OVER! I'M TRYING TO GET A CLOSEUP OF THAT GROUSE'S NEST!
THIS IS THE LIFE, ANDY! GOOD FOR WHAT AILS YOU! NOTHING BUT CLEAN, SWEET AIR, PLENTY OF SPACE, PEACE AND QUIET... WHAT'S THAT?
QUIET, ANDY! IT'S THE FOREST RANGER! DID YOU FIRE THAT SHOT, JIM?
SURE DID, MARK! I WAS HOPING YOU'D HEAR IT. I'VE BEEN ON YOUR TRACK SINCE LATE LAST NIGHT... BAD NEWS, I'M AFRAID!
GRRRR...
IT'S SCOTTY, MARK! HE'S IN LAKEVIEW HOSPITAL. THE YOUNGSTER'S DOWN WITH A BAD FEVER... IT LOOKS SERIOUS!
POOR KID! AND THERE'S NO WAY OF REACHING HIS DAD! GUESS WE'RE HIS FAMILY NOW, ANDY. COME ON... WE'RE HEADING FOR LAKEVIEW!
LAKEVIEW! AS A VACATION SPOT, IT'S GOT EVERYTHING... EXCEPT CLEAN WATERS. BET SCOTTY'S BEEN SWIMMING IN THAT POLLUTED LAKE!
LAKEVIEW'S BEEN BUILDING UP A DANGEROUS POLLUTION PROBLEM FOR YEARS! THAT SEWAGE DRAINING DOWN FROM RIVERBURGH IS LOADED WITH DISEASES! AND A KID LIKE SCOTTY SUFFERS FOR IT! SOMETHING'S GOT TO BE DONE!

MARK GOES STRAIGHT TO LAKEVIEW HOSPITAL...
CAN YOU PLEASE TELL ME THE ROOM NUMBER OF A PATIENT NAMED--
YOUNG MAN, YOU'LL HAVE TO LEAVE THE DOG OUTSIDE THE BUILDING!
SORRY, ANDY, BUT HOSPITAL RULES — GUESS YOU'LL HAVE TO WAIT OUTSIDE.
YOU MAY GO RIGHT IN, MR. TRAIL!
TELL ME, NURSE, HOW IS SCOTTY? IS IT ALL RIGHT TO TALK TO HIM NOW?
I'M AFRAID NOT, MR. TRAIL! HE'S A VERY SICK BOY!
WE'RE DOING ALL WE CAN, MR. TRAIL. THE BOY SHOULD HAVE BEEN KEPT OUT OF THE POLLUTED LAKE. HE'S CRITICALLY ILL!
IF SCOTTY DOESN'T PULL THROUGH, I'LL-- MAY I LEAVE HIM A NOTE, DR. BOONE?
I KNOW YOU CAN'T HEAR ME, KID, BUT THIS IS A PROMISE! I'LL BE SEEING YOU!
Scotty— While you're fighting to get well I'll be fighting too-- to give Lakeview and Riverburgh clean waters! Mark.
TAKE GOOD CARE OF HIM, NURSE!
WE'LL DO OUR BEST FOR SCOTTY, MR. TRAIL, YOU MAY BE SURE OF THAT!
...AND ANDY KEEPS FAITHFUL WATCH OUTSIDE SCOTTY'S WINDOW
3

MARK HURRIES TO THE LAB OF HIS FRIEND, BOB MASON ...
YOU KNOW WHAT'S HAPPENED TO SCOTTY, BOB! AS STATE SANITARY ENGINEER YOU KNOW THE STORY BETTER THAN I DO! NOW HOW DO WE TELL IT TO THE PEOPLE OF LAKEVIEW!
SANITARY ENGINEER
"MARK, OUR SURVEYS OF THE LAKE HAVE SHOWN A DANGEROUS BACTERIA COUNT AND HEAVY POLLUTION FOR A LONG TIME! LAKEVIEW WAS A POPULAR VACATION TOWN ..."
"IN THE SUMMERTIME, OUR LAKES WERE ALIVE WITH KIDS, SWIMMING, DIVING, HAVING A HIGH OLD TIME IN THE CLEAN WATERS ..."
"AND AS A FISHERMAN, MARK, YOU TELL ME! WHO COULD RESIST THE LURE OF A RUNNING STREAM AND THE SMELL OF TROUT BROILED IN THE OPEN AIR!"
SEEMS NICE ON THE SURFACE, DOESN'T IT? BUT WHEN WE LOOK THROUGH OUR MICROSCOPES AT THOSE TEMPTING WATERS WE FIND...
4
...THIS! OUR RIVERS, LAKES AND STREAMS ARE POLLUTED BY WASTES CONTAINING DEADLY GERMS AND BACTERIA! OUR WATERS ARE DISEASE-CARRIERS!"
DYSENTERY
TYPHOID
CHOLERA

SO SCOTTY'S CRITICALLY ILL IN THE HOSPITAL, THE HEALTH OF EVERY KID AND GROWNUP IN LAKEVIEW IS THREATENED AND NOT A THING IS DONE ABOUT IT!
IT'S NOT ONLY LAKEVIEW, MARK. RIVERBURGH IS JUST AS MUCH TO BLAME!
I KNOW. JUST A FEW MILES UPSTREAM, RIVERBURGH KEEPS DUMPING ITS RAW SEWAGE AND FACTORY WASTES INTO THE WATER! EVERYONE'S RESPONSIBLE... AND EVERYONE SUFFERS!
I'VE GIVEN THEM THE FACTS, MARK! I FEEL THAT IF THE PEOPLE ARE TOLD THE TRUTH, THEY WILL DO WHAT NEEDS TO BE DONE. THAT'S THE DEMOCRATIC WAY!
LAKEVIEW
RIVERBURGH
"I'VE TALKED TO CITY OFFICIALS..."
GENTLEMEN, EVERY COMMUNITY IN THE COUNTRY HAS TWO RESPONSIBILITIES! FIRST, TO MAKE HARMLESS THE WASTES IT POURS INTO THE RIVERS AND STREAMS! SECOND, TO PROTECT ITSELF FROM THE WASTES OF OTHER COMMUNITIES!
EACH NEW COMMUNITY A NEW SOURCE OF POLLUTION
INDUSTRIAL WASTES
"I'VE TALKED TO FACTORY OWNERS..."
YOUR COOPERATION IS ESSENTIAL! NATURALLY, YOU MUST DISPOSE OF YOUR PLANT WASTES, BUT THERE ARE WAYS TO TREAT THEM — TO SAVE OUR WATERS!
SO YOU SEE, MARK, THE PEOPLE OF LAKEVIEW AND RIVERBURGH KNOW ABOUT THE POLLUTION PROBLEM --
FINE! LET'S USE THAT KNOWLEDGE YOU'VE GIVEN THEM AND GET SOMETHING DONE!
LABORATORY
5

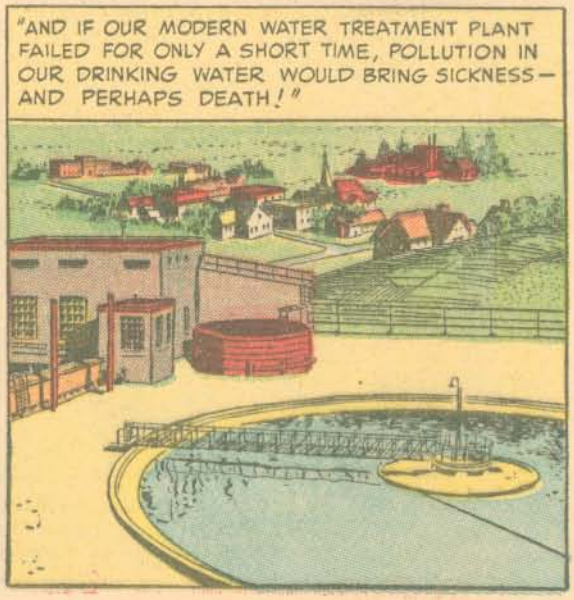
EARLY NEXT DAY...
SCOTTY, I'M WORKING ON THAT PROMISE I MADE YOU! YOU STARTED BIG DOINGS AROUND HERE!
I'LL MAKE A PROMISE TO YOU, TOO, MARK - THAT I'M GOING TO GET WELL!

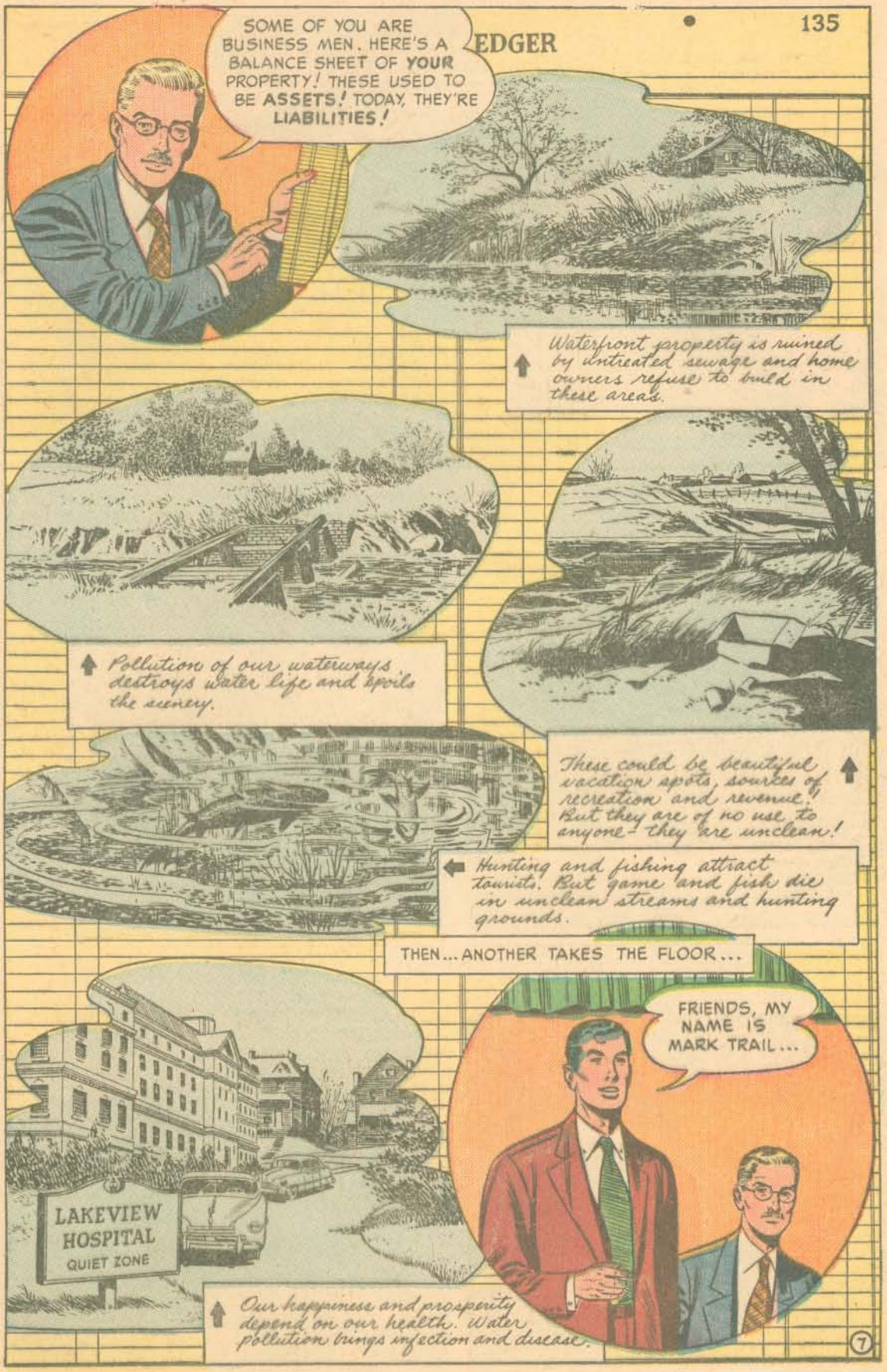
LATER, IN THE SCHOOL AUDITORIUM, A MEETING IS CALLED TO ORDER...
CITIZENS OF LAKEVIEW AND RIVERBURGH, THIS IS NOT JUST ANOTHER MEETING. IT'S A CALL TO ARMS! AT THIS VERY MOMENT, A BOY LIES SICK IN LAKEVIEW HOSPITAL! WE'RE HERE TO DECLARE WAR ON THE POLLUTED WATERS THAT INFECTED HIM... AND THREATEN US ALL!

SINCE PICTURES SPEAK LOUDER THAN WORDS, I'D LIKE TO SHOW YOU A FEW! WE USED TO BE PROUD OF OUR RECREATION SPOTS, OUR LOVELY SHORES AND BEACHES! BUT LITTLE BY LITTLE, SIGNS GO UP... "KEEP OUT... CONTAMINATED WATERS!"
KEEP OUT

"THE UNCLEAN WATERS BEGAN TO TAKE THEIR TOLL... KILLING OFF MANY FISHES AND WILD GAME..."

"WASTES FROM THIS FACTORY POLLUTE OUR WATERS... BUT THE DAMAGE DOESN'T STOP THERE--BECAUSE THE WATER IS MADE UNFIT FOR OTHERS FACTORIES DOWNSTREAM!"


"AND IF OUR MODERN WATER TREATMENT PLANT FAILED FOR ONLY A SHORT TIME, POLLUTION IN OUR DRINKING WATER WOULD BRING SICKNESS - AND PERHAPS DEATH!"


SOME OF YOU ARE BUSINESS MEN. HERE'S A BALANCE SHEET OF YOUR PROPERTY! THESE USED TO BE ASSETS! TODAY, THEY'RE LIABILITIES!
Waterfront property is ruined by untreated sewage and home owners refuse to build in these areas.
Pollution of our waterways destroys water life and spoils the scenery.
These could be beautiful vacation spots, sources of recreation and revenue. But they are of no use to anyone - they are unclean!
Hunting and fishing attract tourists. But game and fish die in unclean streams and hunting grounds.
THEN... ANOTHER TAKES THE FLOOR...
FRIENDS, MY NAME IS MARK TRAIL...
LAKEVIEW HOSPITAL
QUIET ZONE
Our happiness and prosperity depend on our health. Water pollution brings infection and disease.
7

I'M A CITIZEN OF THIS COMMUNITY. THIS IS **MY** PROBLEM TOO... THIS IS **EVERYONE'S** PROBLEM! THIS IS EVERYONE'S **ENEMY!**

MR. WATER POLLUTION!

"OVER 8,000 AMERICAN COMMUNITIES WITH 60 MILLION PEOPLE — OVER 9,000 FACTORIES **HAVE NOT ACTED TO STOP POLLUTION!**"

"SEWAGE AND WASTES FROM THESE CITIES AND FACTORIES ARE ACTUALLY **DESTROYING** THE USEFULNESS OF OUR WATER SUPPLY!"

"THEY ARE POURING BILLIONS OF GALLONS OF POISONOUS WASTES INTO AMERICAN WATERS EVERY DAY!"

"THE TIME IS FAST APPROACHING, NO, THE TIME IS HERE -- WHEN WE MUST STOP THIS FLOOD OF POLLUTION OR BE DELUGED BY IT!"

I CAN'T IMAGINE ANYONE HERE TOSSING GARBAGE INTO HIS NEIGHBOR'S YARD. BUT IT'S JUST AS OFFENSIVE AND DANGEROUS TO DIRTY OUR STREAMS WITH SEWAGE! THE TIME TO START CLEANING UP IS--**NOW!**

THAT'S RIGHT! NOW'S THE TIME TO CLEAN UP OUR WATERS! AND HERE'S HOW WE CAN DO IT--

FIRST, RIVERBURGH HAS A RESPONSIBILITY TO ITSELF AND TO ITS NEIGHBOR, LAKEVIEW. RIVERBURGH MUST BUILD A PLANT TO TREAT ITS CITY AND FACTORY WASTES!
R. WATER POLLUTION!
WE CAN DO IT IF WE KEEP ON WORKING TOGETHER!
"THIS PROTECTIVE PLANT WILL RESTORE CLEAN, PURE WATER! SPORTS, RECREATION, A SOURCE OF GOOD DRINKING WATER ARE ASSETS WHICH EVERY CITIZEN HAS A RIGHT TO ENJOY!"
THE AUDIENCE HAS BEEN LISTENING TO MARK AND BOB... AND LEARNING...
WE'RE ASKING FOR YOUR SUPPORT TO GET CLEAN STREAMS FOR THIS AREA—AS PART OF A NATIONWIDE CAMPAIGN TO FIGHT FILTH!
AYE!
I MOVE WE VOTE FOR THIS PROGRAM... ALL IN FAVOR SAY AYE!
AYE!
LOOKS LIKE IT'S UNANIMOUS! A BARRELFUL OF AYES!
JUST A MINUTE HERE! I VOTE NO!
9

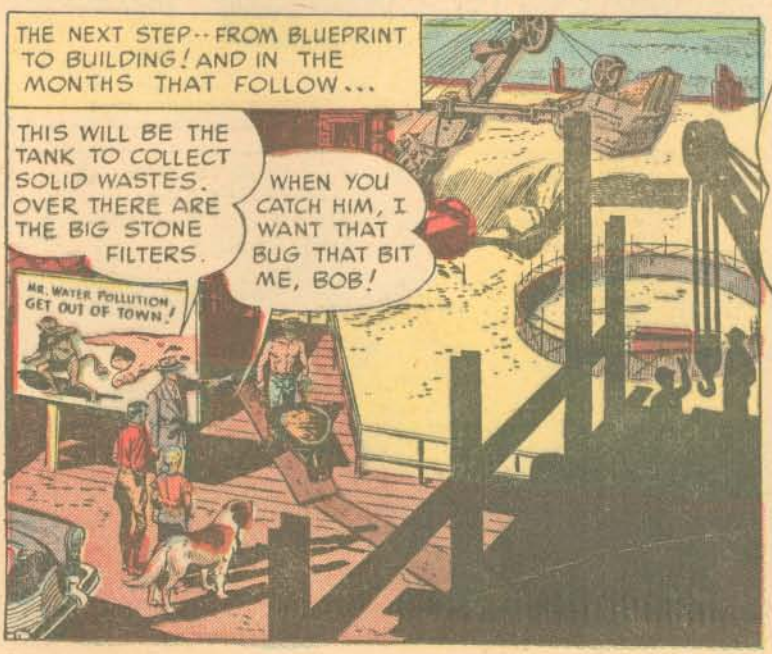
FIRST, RIVERBURGH HAS A RESPONSIBILITY TO ITSELF AND TO ITS NEIGHBOR, LAKEVIEW. RIVERBURGH MUST BUILD A PLANT TO TREAT ITS CITY AND FACTORY WASTES!
WE CAN DO IT IF WE KEEP ON WORKING TOGETHER!
"THIS PROTECTIVE PLANT WILL RESTORE CLEAN, PURE WATER! SPORTS, RECREATION, A SOURCE OF GOOD DRINKING WATER ARE ASSETS WHICH EVERY CITIZEN HAS A RIGHT TO ENJOY!"
THE AUDIENCE HAS BEEN LISTENING TO MARK AND BOB... AND LEARNING...
WE'RE ASKING FOR YOUR SUPPORT TO GET CLEAN STREAMS FOR THIS AREA—AS PART OF A NATIONWIDE CAMPAIGN TO FIGHT FILTH!
AYE!
I MOVE WE VOTE FOR THIS PROGRAM... ALL IN FAVOR SAY AYE!
AYE!
LOOKS LIKE IT'S UNANIMOUS! A BARRELFUL OF AYES!
JUST A MINUTE HERE! I VOTE NO!

THE LONE DISSENTER IS ED BEGLEY, A CITIZEN OF LAKEVIEW...
LOOK, FOLKS, I'M ALL FOR IMPROVEMENTS, BUT THERE'S A LIMIT! WHY, A PROJECT LIKE THAT COSTS THOUSANDS! WHERE'S THE MONEY TO COME FROM IF NOT OUR OWN POCKETS...
MR. BEGLEY! MR. BEGLEY!
I RUSHED RIGHT OVER -- TO TELL YOU -- BZZZZ.. BZZZZ...
JIMMY, YOU KNOW BETTER THAN TO INTERRUPT... WHAT!!
WHAT I SAID BEFORE, FORGET IT! I WITHDRAW MY OBJECTIONS!
I...I'VE JUST BEEN TOLD THAT MY SON, ED JUNIOR, HAS BEEN TAKEN TO LAKEVIEW HOSPITAL! HE'S GOT A FEVER SICKNESS... CAME DOWN WITH IT WHILE ON A FISHING TRIP...
SEEMS LIKE FATE, CALLING ME A FOOL FOR TRYING TO PUT A PRICE-TAG ON THE HEALTH OF OUR CHILDREN! CALL IT UNANIMOUS, MR. TRAIL. IT'S WORTH EVERY PENNY WE'VE GOT TO KEEP OUR KIDS OUT OF THE HOSPITAL!
10
THE MEETING ENDS... AND THE WORK BEGINS! MARK REPORTS TO "HEADQUARTERS"...
THIS IS A SPECIAL OCCASION, MARK! I'M SITTING UP!
SO ARE LAKEVIEW AND AND RIVERBURGH, SCOTTY. THEY'VE JUST VOTED FOR A CLEAN-UP PROGRAM TO GO INTO EFFECT... IMMEDIATELY!

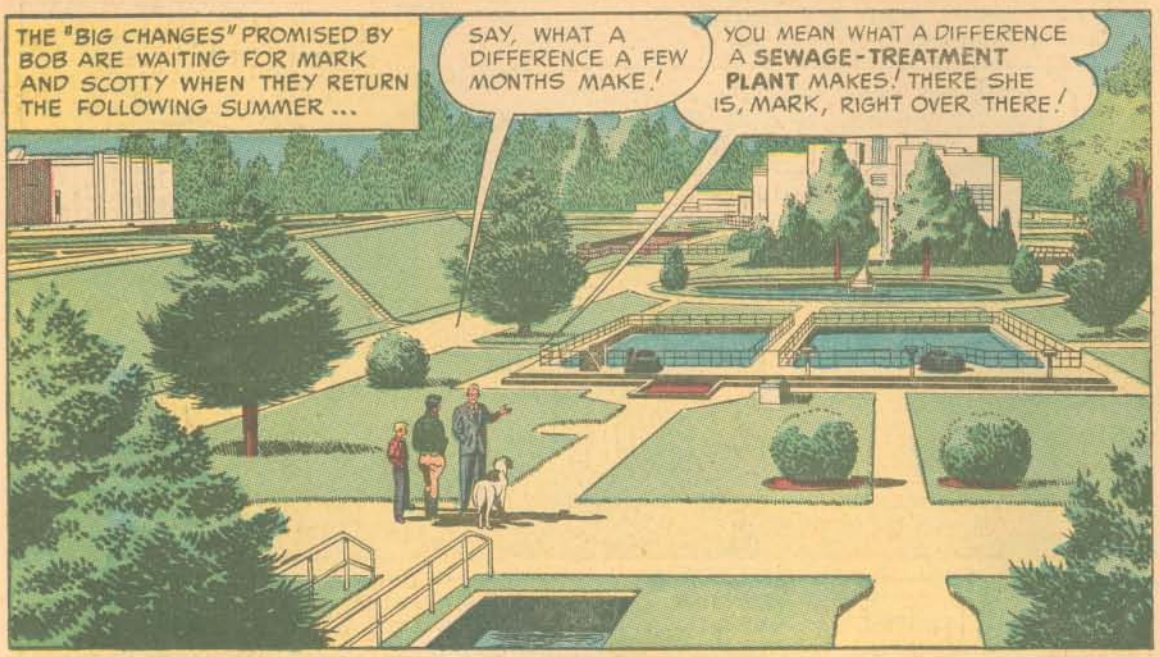
THE FIRST STEP -- PLANS FOR A TREATMENT PLANT TO SERVE RIVERBURGH AND LAKEVIEW. IN A FEW WEEKS...
HERE ARE THE BLUEPRINTS, MARK. THE ENGINEERING PART IS EASY. BUT THE TOUGHEST PART OF THE JOB WAS ROUSING THE PEOPLE TO CARRY THIS CLEAN-UP PROGRAM THROUGH!
I'VE BROUGHT SOMEONE WHO'D LIKE TO SEE HOW YOU DO IT!

SCOTTY!
I'VE KEPT MY PART OF THE PROMISE TOO, MARK! THAT FEVER'S LICKED!
ARF! ARF!

YOU'RE A SIGHT FOR THESE OLD EYES, BOY! IT'S GREAT TO SEE YOU UP AND AROUND AGAIN!
IT FEELS GREAT TOO! I'M READY TO PITCH IN AND GO TO WORK, MARK!

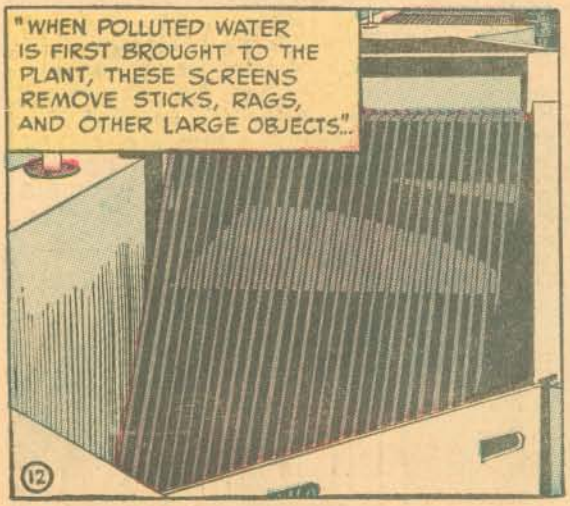

THE NEXT STEP -- FROM BLUEPRINT TO BUILDING! AND IN THE MONTHS THAT FOLLOW...
THIS WILL BE THE TANK TO COLLECT SOLID WASTES. OVER THERE ARE THE BIG STONE FILTERS.
WHEN YOU CATCH HIM, I WANT THAT BUG THAT BIT ME, BOB!
MR. WATER POLLUTION, GET OUT OF TOWN!

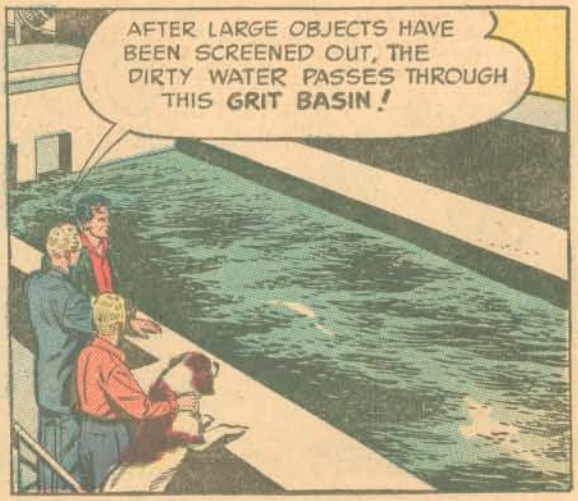
TOO SOON... FALL ARRIVES.
SCOTTY'S GOING BACK TO SCHOOL, AND I'M HEADING FOR LOST FOREST -- I'VE GOT SOME UNFINISHED BUSINESS THERE!
SCOTTY LOOKS AS FIT AS A YOUNG REDWOOD TREE! I'M EXPECTING YOU BOTH BACK HERE NEXT SUMMER -- AND BE PREPARED FOR SOME BIG CHANGES!

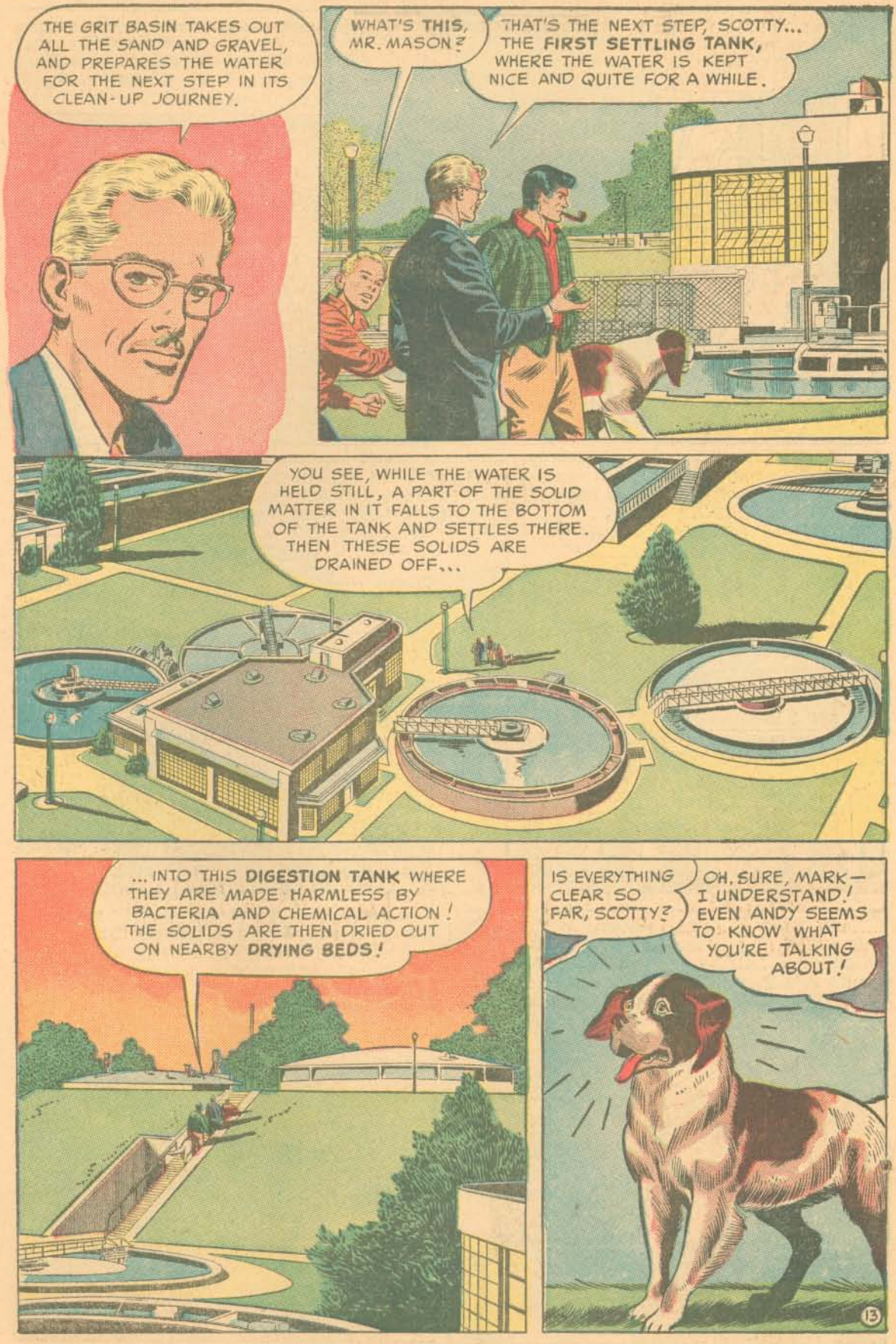

THE "BIG CHANGES" PROMISED BY BOB ARE WAITING FOR MARK AND SCOTTY WHEN THEY RETURN THE FOLLOWING SUMMER ...
SAY, WHAT A DIFFERENCE A FEW MONTHS MAKE!
YOU MEAN WHAT A DIFFERENCE A SEWAGE-TREATMENT PLANT MAKES! THERE SHE IS, MARK, RIGHT OVER THERE!

GOLLY, IT DOESN'T LOOK LIKE MUCH... I MEAN IT DOESN'T HAVE A LOT OF MACHINERY AND STUFF LIKE I EXPECTED!
IT HAS EVERYTHING IT NEEDS, SCOTTY, TO KEEP OUR WATERS CLEAN! HERE — LET ME SHOW YOU HOW THIS SEWAGE-TREATMENT PLANT WORKS!

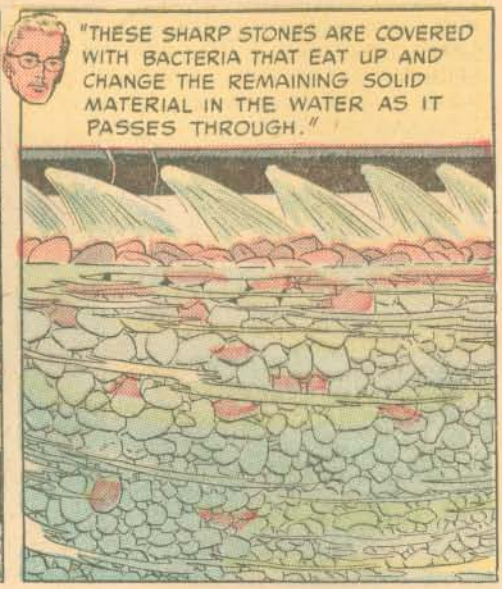
REMEMBER THE PURPOSE OF THIS PLANT IS TO TAKE DIRTY, POLLUTED WATER FROM OUR HOMES AND FACTORIES — AND TURN THAT WATER BACK INTO OUR RIVERS AND STREAMS — CLEAR AND CLEAN!


"WHEN POLLUTED WATER IS FIRST BROUGHT TO THE PLANT, THESE SCREENS REMOVE STICKS, RAGS, AND OTHER LARGE OBJECTS"..
12


AFTER LARGE OBJECTS HAVE BEEN SCREENED OUT, THE DIRTY WATER PASSES THROUGH THIS GRIT BASIN!

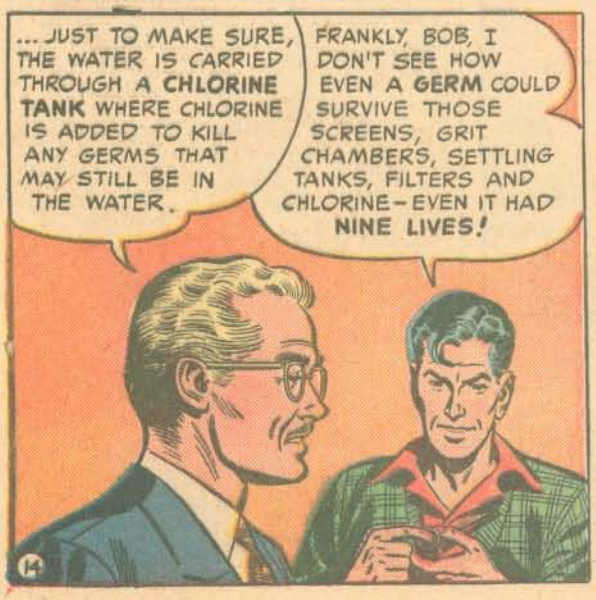

THE GRIT BASIN TAKES OUT ALL THE SAND AND GRAVEL, AND PREPARES THE WATER FOR THE NEXT STEP IN ITS CLEAN-UP JOURNEY.
WHAT'S THIS, MR. MASON?
THAT'S THE NEXT STEP, SCOTTY... THE FIRST SETTLING TANK, WHERE THE WATER IS KEPT NICE AND QUITE FOR A WHILE.
YOU SEE, WHILE THE WATER IS HELD STILL, A PART OF THE SOLID MATTER IN IT FALLS TO THE BOTTOM OF THE TANK AND SETTLES THERE. THEN THESE SOLIDS ARE DRAINED OFF...
... INTO THIS DIGESTION TANK WHERE THEY ARE MADE HARMLESS BY BACTERIA AND CHEMICAL ACTION! THE SOLIDS ARE THEN DRIED OUT ON NEARBY DRYING BEDS!
IS EVERYTHING CLEAR SO FAR, SCOTTY?
OH, SURE, MARK— I UNDERSTAND! EVEN ANDY SEEMS TO KNOW WHAT YOU'RE TALKING ABOUT!
13

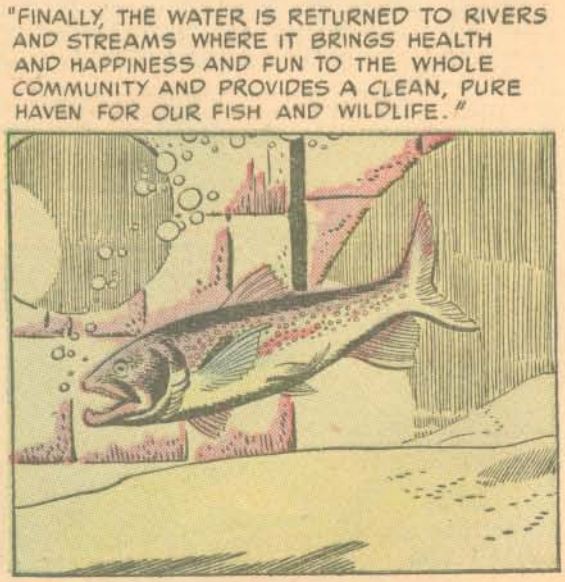
NEXT THE DIRTY WATER PASSES THROUGH THESE **STONE FILTERS**...


"THESE SHARP STONES ARE COVERED WITH BACTERIA THAT EAT UP AND CHANGE THE REMAINING SOLID MATERIAL IN THE WATER AS IT PASSES THROUGH."

THEN THE WATER IS KEPT FOR A WHILE IN THIS **SECONDARY SETTLING TANK**... WHERE SOLIDS SETTLE TO THE BOTTOM AND ARE DRAINED OFF.

I GUESS WHEN THE WATER HAS PASSED THROUGH THE **SECOND** SETTLING TANK IT'S PRETTY WELL CLEANED UP AGAIN!
WELL, YES, SCOTTY, IT IS! BUT JUST TO MAKE **SURE**...


... JUST TO MAKE SURE, THE WATER IS CARRIED THROUGH A **CHLORINE TANK** WHERE CHLORINE IS ADDED TO KILL ANY GERMS THAT MAY STILL BE IN THE WATER.
FRANKLY, BOB, I DON'T SEE HOW EVEN A **GERM** COULD SURVIVE THOSE SCREENS, GRIT CHAMBERS, SETTLING TANKS, FILTERS AND CHLORINE - EVEN IT HAD **NINE LIVES!**
14


"FINALLY, THE WATER IS RETURNED TO RIVERS AND STREAMS WHERE IT BRINGS HEALTH AND HAPPINESS AND FUN TO THE WHOLE COMMUNITY AND PROVIDES A CLEAN, PURE HAVEN FOR OUR FISH AND WILDLIFE."

THE GOOD WORD IS SPREADING! OUR NEIGHBORING TOWNS HAVE STARTED CLEAN-UP CAMPAIGNS OF THEIR OWN!
THE ONLY CONTAGIOUS THING IN THESE PARTS NOW IS CLEANLINESS!
THAT'S ONE CONTAGION I LIKE! CONGRATULATIONS, BOB! IT WAS YOUR KNOW-HOW THAT DID THE JOB!
IT TOOK DO-HOW, TOO, MARK... YOU'RE THE GUY WHO SHOWED US THAT! AND THE FACTORY OWNERS, BUSINESSMEN, OFFICIALS AND CONSERVATION GROUPS WHO FOLLOWED THROUGH... THAT WAS TEAMWORK!
IT TOOK SOME MONEY TOO, DIDN'T IT?
YES, SCOTTY, IT COSTS MONEY. BUT WHEN FOLKS WORK TOGETHER IT COSTS EACH FAMILY ONLY A FEW CENTS A DAY... AND FOLKS ARE REALIZING MORE AND MORE THAT THEIR YOUNGSTERS' HEALTH IS MORE IMPORTANT THAN ALL THE MONEY IN THE WORLD!
SAY, ISN'T THAT ED BEGLEY... THE KID WHO WAS IN LAKEVIEW HOSPITAL, TOO? HEY, ED! IT'S ME, SCOTTY!
HI, SCOTTY! C'MON DOWN TO THE LAKE!
THE PROOF OF THE CLEAN-STREAM PROGRAM IS IN THE WATER!
LOOK AT US NOW, MARK!! OUR RIVERS FIT FOR FISHING, OUR LAKES FILLED WITH HAPPY SWIMMERS AND BOATSMEN! EVEN OUR DRINKING WATER HAS A FRESHER TASTE, A NEW SPARKLE!
THE WHOLE COMMUNITY HAS A NEW LEASE ON LIFE!
HEY, EVERYBODY, C'MON IN! THE WATER'S FINE!
15

A LETTER FROM MARK TRAIL . . .

Lost Forest

Dear Friends:

The folks in Lakeview and Riverburgh found out what can happen when we don't take care of our water. And they also found out that they could do something about it! They got expert help, learned the facts about water pollution, talked things over, and then went to work to solve the problem.

How about your town? Are you and your neighbors joining in the fight for clean water? Here's how you can do your part:

Talk about the problem of water pollution with your city officials. Ask them to write your State Pollution Control Officer for the facts -- what needs to be done in your town. Or write him yourself. It's his job to help you.

Talk about the problem in your schoolroom, your community or social club, your own living-room. You and your friends and neighbors are the people who can get things started and keep them moving!

Is clean water worth the time, the money and effort? You don't have to take my word for it. Or Scotty's. Just ask the people of Lakeview, or Riverburgh, or any other town that has won the battle against unclean waters!

Yours for better health,

Mark Trail

Prepared with the Cooperation of the Federal Security Agency, Public Health Service.